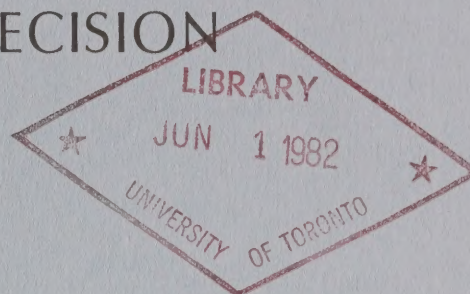


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NATIONAL ENERGY BOARD  
<sup>v</sup>  
REASONS FOR DECISION  
<sub>3</sub>



In the Matter of  
Phase I - The Review Phase  
of the  
Gas Export Omnibus Hearing, 1982

May 1982





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NATIONAL ENERGY BOARD

Reasons for Decision

In the Matter of  
Phase 1 - The Review Phase  
of the

Gas Export Omnibus Hearing, 1982

857-1981  
C.E. Edge  
J.B. Surber  
A.B. Hillour  
May 1982

Ce rapport est publié  
séparément dans les deux  
langues officielles.





(i)

IN THE MATTER OF the National Energy Board Act  
and the Regulations made thereunder;

AND IN THE MATTER OF a review of existing  
natural gas licences and the Board's surplus  
determination procedures;

AND IN THE MATTER OF applications made by  
Pan-Alberta Gas Ltd., Sulpetro Limited and  
TransCanada PipeLines Limited for licences  
under Part VI of the National Energy Board Act  
for the export of natural gas to the United  
States of America;

AND IN THE MATTER OF applications made by  
Alberta and Southern Gas Co. Ltd., Pan-Alberta  
Gas Ltd. and TransCanada PipeLines Limited  
under Part VI of the National Energy Board Act  
to vary existing natural gas export licences.

#### REVIEW PHASE

Heard in Ottawa, Ontario on 16, 17, 18, 22, 23, 24, 25, 29, 30 and  
31 March, and 1, 5 and 6 April 1982.

#### BEFORE:

C.G. Edge	Presiding Member
R.B. Horner, Q.C.	Member
A.B. Gilmour	Member



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## CHAPTER I

### INTRODUCTION

In April 1981, the Board wrote to holders of natural gas export licences informing them of its concern that certain of these licences were being utilized below authorized levels. The Board indicated that in those circumstances it felt that it might be timely to undertake a formal review of existing export licences to determine the appropriateness of the volumes authorized for export as well as to consider whether take-or-pay conditions should be incorporated into the licences.

Following this preliminary examination and review of the responses filed by licence-holders, the Board, in a second letter, in September 1981, put licence-holders on notice that the Board, pursuant to subsection 17(2) of the National Energy Board Act, had under consideration amendments to existing licences which would remove annual averaging provisions in those situations where it was deemed appropriate. The Board in advising certain licence-holders also noted that the inclusion of adequate minimum annual take-or-pay provisions in the gas sales contracts of licence-holders was also under consideration.

Again, having considered the responses filed by licence-holders and other interested parties, the Board advised, by its letter dated 4 December 1981, that the issues raised in its earlier correspondence were part of a broader question which embraced the continued appropriateness of the conditions attached to existing licences. The Board therefore decided to defer its decision on whether to remove annual averaging conditions from licences and indicated that it would consider this matter and related issues in the first phase of the next Gas Export Omnibus Hearing.

Subsequently, on 14 December 1981, the Board issued Order No. GH-6-81, setting down for public hearing, pursuant to section 17 of the Act, a review of the terms and conditions of existing natural gas licences.



The Board also indicated in GH-6-81 its intention to review its surplus determination procedures as part of Phase 1, the Review Phase of the Gas Export Omnibus Hearing. This review was undertaken as a result of the changing conditions which have prevailed in Canada and in the United States in general, and in the natural gas industry in particular, since the existing surplus tests were formulated in February 1979. The Board's most recent Energy Supply/Demand Inquiry (1981) was not specifically intended to deal with the tests, and further, in light of representations received questioning the continued appropriateness of these procedures, the Board considered it timely to review the manner in which it currently determines whether there is natural gas surplus to reasonably foreseeable Canadian requirements. This review also included a consideration of the allowance to be made for existing export licences in the determination of surplus.

The Board has considered all of the evidence and arguments presented during the Review Phase and has made a number of decisions which will provide guidance to applicants in these and future proceedings. These decisions have been classified under the headings of "Licence Issues" and "Surplus Determination Procedures" but it should be stated that many of the individual decisions are interrelated and therefore this report should be read as a whole.

During the Phase 1 hearing the Board, in response to motions from four applicants (TransCanada, Canadian-Montana, Westcoast, and Columbia) agreed to hear at the close of Phase 1 requests to vary or alter existing licences which did not alter the term quantities authorized for export. The Board's Decisions and Reasons with respect to these applications are the subject of a separate report.

As background to the decisions of this Report, it is perhaps helpful to set the context in which they were made. The Board is familiar with, and many parties made reference to, the complex chain of interlocking contracts from the producer to the importer which provide the foundation for the natural gas trade between Canada and the United States. Licences are issued only

after a review of such contracts and the Board must always be cognizant of the contractual relationships between parties when issuing or amending a licence.

In the course of the hearing, a large number of detailed proposals were examined by Board Counsel, the members of the Panel and all interested parties including the licence-holders. The information obtained and tested in this manner has proved to be of invaluable assistance to the Board in arriving at the conclusions which are outlined in the following pages. The Board would like to thank all parties to Phase I for their very helpful submissions and for the cooperation they exhibited in assisting the Board to undertake this review. The advantages which have been realized from this active interface with the industry, United States customers, representatives of the provincial governments and agencies and the Board have been considerable. It is hoped that through the continued use of the hearing process, at which the contending views of all interested parties can be tested, conclusions and recommendations appropriate to the dynamic context in which the industry must operate will be available.

The Board has set down Phase II of the Gas Export Omnibus Hearing, 1982 to commence in Ottawa on 13 July 1982. Phase II, the Licence Phase, will deal with the economic, contractual, regulatory and other aspects of the individual applications for export licences.

Phase III, the Surplus Phase, will deal with whether an exportable surplus exists and if so, to which, if any of the applicants the Board should recommend that the Governor in Council approve the issuance of export licences.

In Phase III, the Board, in determining surplus, will use, and will expect applicants to use, the surplus procedures set forth in this report on Phase I of the hearing.

If export licences are issued, a certificate hearing may be held if additional facilities are required in Canada to transmit the additional quantities of natural gas.



CHAPTER 2  
LICENCE ISSUES

2.1 Introduction

In Annex I to Hearing Order GH-6-81, the Board requested views of interested parties on items 1 through 8 dealing specifically with issues that affect both existing and new export licences. This chapter addresses these various issues and provides an overview of the submitters' views together with the Board's views and its reasons for decision.

2.2 Annual Averaging

Annual averaging is a condition in some licences which permits the licensee to make up underdeliveries incurred in previous years by exporting at the maximum daily level until the amount exported on a cumulative average annual basis equals the annual exports allowed by the licence.

Annual averaging was included in certain licences to permit making up underdeliveries resulting from facility-related problems, delays in obtaining regulatory approvals, lower deliveries during the market build-up period, or on account of milder than normal weather.

Underdeliveries which cannot be exported in later years because of the maximum daily or annual limitations in the licence, even with recourse to annual averaging, have come to be known as trapped gas.

The majority of submissions dealing with the annual averaging issue supported the concept because of the additional flexibility it conferred on the licence. Some, such as TransCanada, KannGaz and Sulpetro suggested possible variations but the basic principle remained unchanged. TransCanada made a recommendation that dealt specifically with the trapped gas issue. It suggested that licence-holders apply to the Board within three months after the end of the current annual period for licence amendments that would allow firm deliveries of accumulated trapped gas under the licence, provided adequate take-or-pay provisions were included.

The Board is of the opinion that existing licences benefit from the flexibility of annual averaging. The Board recognizes that some licence-holders may have little recourse to annual averaging because of their low operating load factors, but in the case of exporters operating at high load factors this provision affords extra operational flexibility, as well as the ability to take advantage of additional market opportunities, particularly in the short term. Annual averaging is also an important means of recovering gas paid for but not taken.

The Board has decided not to change annual averaging conditions in existing licences. The Board, for the purposes of greater uniformity of licences and for operational flexibility, will be prepared to consider, upon application, the inclusion of annual averaging conditions in existing licences which do not have them. This should reduce the problem of trapped gas. Procedures to provide further relief for trapped gas are discussed in section 3.5.

For future licences, the Board will consider applications that include annual averaging and will review the need for and benefits of having this provision included when the application is heard.

### 2.3 Maximum Day, Annual, and Term Volume

In considering the maximum daily, annual and term quantities that make up a licence, the Board's intent was to determine the factors that influence the determination of the maximum daily quantity and the relationship between the maximum daily level and the annual level, and in turn the relationship to the term quantity. Essentially, evidence submitted indicated that the determination of contract quantities between buyer and seller was dependent on the market conditions and the facility capacity unique to the market being served. This results in a range of relationships between maximum day and annual requirements from a situation where the maximum day might be as high as 190 percent of average day to the case where it would equal average day. In

almost all cases, however, it was stated that term volume was the most important licence condition and that it should not be subjected to change during the licence term.

The Board has decided not to change the maximum day, or the annual or term volumes of existing licences as a result of the Phase I proceeding.

#### 2.4 Take-or-Pay

The issue as to whether take-or-pay conditions should be included in licences arises out of concern that in some cases the take-or-pay provisions of a contract between exporter and importer have been amended without reference to the Board. As a result of such contract amendments, circumstances which were held by the Board to be in the public interest at the time a licence was issued have been altered without an opportunity for the Board to assure itself that the export continues to serve the Canadian public interest.

While all parties stressed the important role contracts play in defining the business relationship between the exporter and the importer, very few were in favour of the inclusion of take-or-pay provisions in the licence. This opposition was based essentially upon the view that such "unilateral" action by the Board would impinge on the contracting parties' ability to contract as freely as the circumstances might require. However, the need to provide either prior notification of material changes to the Board or to require Board approval for such changes prior to their becoming effective was more acceptable to submitters.

The Board is aware that the United States Economic Regulatory Agency requires that contracts which have been amended be submitted to it for approval. The Board believes that it, too, must ensure that natural gas, which has been licensed for export in circumstances which were found to be in the public interest, continue to be exported over the term of the licence under circumstances which are equally in the public interest.



However, the Board also recognizes that circumstances may change and that it may be necessary to alter the conditions under which an export takes place; for example, take-or-pay or other material provisions in a contract may be changed by the contracting parties to meet new market situations. Therefore, the Board is prepared to recommend that the Part VI Regulations to the Act be amended to include provisions to the effect that natural gas shall be exported pursuant to the agreements filed with and approved by the Board.

The licensee would be required to file any contract amendments with the Board but the export would continue to be made under the provisions of the original contract unless the contract amendments had been approved by the Board. The Board will also recommend that a provision be included to authorize the Board to exempt from this requirement for Board approval any contractual changes which do not materially affect the conditions under which the export would take place. These proposed changes to the Regulations would be applicable to both existing and new export licences, with the Board utilizing the contracts, as amended, currently on file with it in the case of the existing licences.

Although the above procedure does not specifically prescribe desirable take-or-pay levels, the Board wishes to advise that, in assessing applications for new licences, it will place considerable emphasis upon the existence of reasonable take-or-pay provisions in the underlying export/import contract, where such provisions are appropriate. It is the Board's view that this approach preserves the right of the contracting parties to conclude their business relationships freely, responding as necessary to unique circumstances which may change over time.

While the foregoing addresses the Board's concern in respect of changes to export contracts, it does not deal with the problem of ensuring that all existing contracts contain reasonable take-or-pay clauses. In this regard there are two situations in which the Board is not satisfied that the existing take-or-pay provisions are in the public interest. The first is Licence GL-41

in respect of which the Board had requested, in its letter of 11 September 1981, that Westcoast incorporate a satisfactory take-or-pay clause in its contract. This take-or-pay issue was the subject of a considerable amount of evidence and discussion in the Phase I proceeding. The Board finds that Westcoast and Northwest have been pursuing and continue to vigorously pursue off-line sales in the United States which, if successful, would cause Northwest to commit to a 65 percent take-or-pay clause in its contract with Westcoast. The Board notes that crucial factors at this juncture are regulatory proceedings in the United States relative to the 5.7 million cubic metres per day best efforts sale, and the 8.5 million cubic metres per day firm sale, both to Texas Eastern. In light of this, the Board does not believe that any action on its part, at this time, would facilitate the resolution of this matter. Instead, the Board serves notice that, if by 1 July 1983, Westcoast has not included in its contract take-or-pay provisions satisfactory to the Board, the Board will, as appropriate in the circumstances prevailing at that time, initiate a review under section 17 of the Act to require Westcoast to show cause why the quantities in Licence GL-41 should not be reduced.

The second situation relates to Licence GL-52 held by Canadian-Montana. While the Board is well aware of the efforts of Canadian-Montana to rectify its unsatisfactory take-or-pay situation, if, by 1 July 1983, take-or-pay provisions satisfactory to the Board have not been included in the contract between the exporter and the importer, the Board will, as appropriate in the circumstances prevailing at that time, initiate a review under section 17 of the Act to require Canadian-Montana to show cause why the quantities in Licence GL-52 should not be reduced.

## 2.5 Recovery of Take-or-Pay at the Expiry of the Licence

The issue of take-or-pay as discussed in the preceding section 2.4 leads to the issue of whether a condition should be added to a licence which would enable an exporter to continue to sell gas to its buyer, after the formal expiry date, in the event that there remained unrecovered quantities of gas that had been

paid for but not taken. Views of the submitters were generally that there is a need to provide a licence condition that would allow this to take place. A number of means to accomplish this were suggested. Most agreed that the inclusion of a recovery condition for take-or-pay quantities would aid exporters' attempts to negotiate adequate minimum take-or-pay clauses in their sales contracts.

The Board recognizes the importance of having adequate take-or-pay terms for all existing export sales as well as for new export sales. The Board considers that a condition that would allow recovery of take-or-pay quantities at the expiry date of the licence, subject to available surplus, deliverability and pipeline capacity at the time the sale will be made, would be of benefit to the United States buyer and the Canadian exporter and producer.

Insofar as new export licences are concerned, the Board will consider applications to include provisions allowing for the recovery of volumes paid for but not taken at the expiry date of the licence. If approved, such a condition would extend the licence for a one-year period to allow for make-up of quantities of gas paid for but not taken. Recovery during the extended period would be subject to available surplus, deliverability and pipeline capacity at the time the sale will be made. For the extended period, the quantity of gas that could be exported during this one year term would be the lesser of the total amount of undelivered take-or-pay gas or the maximum annual level authorized under the licence during the original licence term.

As there is no similar provision in existing licences, the Board is prepared to consider applications at this time to amend those licences by inserting a provision similar to the one described above. In the alternative, licence-holders may wish to wait in order to ascertain whether they require such a condition in their specific circumstances. If that is the case, the Board will consider such applications when made.



## 2.6 Administrative Licence Matters

Conversion to joules.

Tolerances.

Simplification and standardization of licences.

Consolidation of licences.

Based on the views of the submitters to the Phase I proceedings, the Board finds that there is no need to change existing licences with respect to conversion to joules and for the simplification and standardization of licences. The Board agrees that such changes might have the effect of creating unnecessary problems for the Board itself, the exporter, the importer and import regulatory bodies.

The issue of tolerances in licences was discussed and the Board is of the opinion that tolerances will continue to be included in licences upon application, to the extent that the applicant can substantiate a need for such tolerance levels.

Insofar as consolidation of licences is concerned, the Board will, as time permits, consolidate those licences where a large number of amending orders have been issued. It should be noted, however, that such consolidation would be for reference purposes only and the original licences and amendments thereto shall be the official versions, and nothing set forth in the consolidated form may be taken to override or affect the interpretation of the original licences and amendments thereto.

### CHAPTER 3

#### SURPLUS DETERMINATION PROCEDURES

##### 3.1 Introduction

In its disposition of an application to export natural gas, the Board can issue a licence, subject to the approval of the Governor in Council, only if it has first satisfied itself that the quantity of gas to be exported is surplus to the reasonably foreseeable requirements for use in Canada, having regard to the trends in the discovery of gas in Canada.

Items 9 through 15 of Annex I of Hearing Order GH-6-81 outline matters on which the Board requested views of interested parties on factors affecting gas surplus determination. This chapter provides a summary of procedures used since 1979 by the Board, a summary of the evidence, and the Board's findings on the determination of surplus as it relates to applications for normal export licences. A discussion of procedures for new short-term export authorization for periods up to two years is found in section 3.5.

##### 3.2 Procedures used since 1979

In the February 1979 Gas Report, the Board decided that surplus would be determined by using the following three tests, all of which would have to be met before the Board would deem a surplus to exist.

###### The Current Reserves Test

This test compared the quantity of reserves already found with 25 times the current year's Canadian demand plus remaining authorized exports. If the available established reserves were less than these requirements, no surplus would be available. If reserves exceeded these requirements, the amount of the excess could be declared surplus.

###### The Current Deliverability Test

This test was based on the level of deliveries possible each year from reserves which have already been found ("established reserves"). For there to be a surplus, deliverability from these established reserves had to be able to meet annual Canadian requirements plus authorized exports for a minimum period of five

years. If this minimum period of assured supply could not be satisfied, there would be no surplus. Gas could be declared surplus to the extent there was estimated spare deliverability over and above Canadian requirements plus authorized exports.

#### The Future Deliverability Test

This test was based on the level of deliveries possible each year from established reserves plus estimated future additions to these reserves. Deliverability from these reserves had to be able to meet annual Canadian requirements plus authorized exports for some ten years into the future; otherwise, no surplus would exist. If forecast deliverability exceeded requirements, the amount of the excess could be declared surplus.

If a surplus was found to exist under all three tests, the Board then considered applications to export all or a portion of this surplus. If these applied-for exports depended only on deliverability from reserves already found, the Board considered granting firm export licences. For any portion of the period for which applied-for exports depended on deliverability from established reserves plus estimated future additions to reserves, the Board only granted conditional export licences. That is, if the ability to deliver gas from additions to reserves turned out to be less or if Canadian requirements proved to be greater than had been estimated when the licence was granted, these conditional export authorizations could be reduced or revoked.

For more complete descriptions of the Board's three tests and associated procedures used to apply them, please refer to the Board's reports of February and November 1979 dealing respectively with Canadian natural gas supply and requirements, and applications under Part VI of the NEB Act for the export of natural gas.

### 3.3 Evidence

#### Introduction

Because of the central importance of the Board's surplus determination procedures in the licensing of exports of natural gas, the Board is providing a more complete summary of submitters' views than is contained in other sections of these Reasons for Decision.



### Current Reserves Test

Most submitters agreed in principle with the Board's present Current Reserves Test and recommended its retention. Generally, submitters urged the Board to use the Current Reserves Test as the sole determinant of the quantity of surplus. Twenty-five times this year's Canadian demand (25A1) was generally accepted as an appropriate reserves protection although Westcoast and Canadian Hunter recommended relaxing the protection to 20A1. Dome suggested that the Board ought to eliminate the reserves test altogether and employ a 15-year deliverability test.

Some submitters recommended that the Board include more than established reserves in its Current Reserves Test. NOVA suggested that the Board use a fully appreciated level of established reserves while Shell suggested including five years of appreciation of established reserves. Others simply suggested using more supply without being specific as to how to do this.

### Deliverability Tests

The appropriateness of deliverability tests received the most attention in Phase I of the hearing. The Current Deliverability Test received the most criticism as it was considered unnecessarily restrictive by most parties. Some submitters argued that the Current Deliverability Test was at variance with section 83 of the NEB Act in that it did not have regard "to the trends in the discovery of gas in Canada." Many submitters stated that the Current Deliverability Test was unrealistic because it compared supply from a known, or static, inventory with a growing demand. It was argued that a realistic deliverability test should give some attention to future reserves additions, particularly that portion attributable to appreciation of existing reserves.

Several submitters suggested that the Board eliminate the Current Deliverability Test entirely; however, a few submitters, notably the gas consuming provinces east of Alberta, advocated the Board's retention of the Current Deliverability Test in its present form because it offered a high degree of certitude that Canadian needs would be protected in the short term. Those submitters that

opposed the Current Deliverability Test offered suggestions as to how the Board could incorporate some portion of reserves additions in a revised short-term deliverability test. Some of the suggestions were simple to apply such as those by TransCanada and CPA to include deliverability from a declining percentage of successive annual reserves additions (90, 80, 70, 60 percent of the additions in years 1 through 4 and 50 percent for years thereafter). This proposal was supported by many other submitters. More complicated procedures to calculate deliverability from appreciation of existing reserves were put forward by Shell which suggested the inclusion of five years of connected appreciation, and by NOVA which, in addition to including reserves appreciation, proposed that the period of assured supply be reduced from five years to three years.

The Board's Future Deliverability Test received less criticism. Again, submitters urged the Board to exercise flexibility in its use of this test. Some submitters recommended that the Board retain its Future Deliverability Test as is, while others suggested that it be used merely to monitor expected deliverability. On the one hand, Amoco went so far as to suggest that the Board abandon its Future Deliverability Test while, as previously mentioned, Dome, on the other hand, recommended that it be the only test used to gauge surplus.

In broadest terms, there was considerable consensus among submitters that the Board should introduce more flexibility into its Deliverability Tests. Rigorous treatment of deliverability was not believed to be realistic in light of the flexibility producers have to improve deliverability to overcome small deficiencies if necessary. The producers' perception of available markets would in itself make a difference in the level of deliverability they are willing to develop.

It was recommended that the tests not be used to determine precise profiles for future export authorizations; rather, the deliverability tests should provide an overall guideline within which the Board could exercise its judgement in determining the appropriate volume and duration of new export licences.

### Allowance for Existing Licences

A wide variety of views was expressed on the allowance to be made for authorized exports in the Board's surplus determination procedures. In response to the Board's question as to whether gas subject to take-or-pay clauses should be differentiated from other gas, submitters generally felt that all expected export quantities should be treated the same.

With respect to the Current Reserves Test, most submitters felt that an allowance for less than the remaining term quantity of existing licences would be appropriate. Views ranged from the suggestion that the Board estimate remaining exports, to the recommendation that the allowance be related either to the take-or-pay level or to the maximum annual export level. Examples of this latter approach were a suggestion by Dome that the Board use 110 percent of take-or-pay and by Pan-Alberta that the Board use 95 percent of annual authorized quantities.

Among those opposed to these views were Consolidated, Consumers' Gas, IPAC, TransCanada and Ontario that argued that the Board should allow for the full amount of the remaining term quantity of existing licences in the Current Reserves Test.

Concerning the allowance for current licences in the Deliverability Tests there was greater consensus that some discount from the maximum authorized quantities be used. Submitters felt that including the full authorized quantity of exports was unrealistic given recent experience of actual exports versus those authorized. It was pointed out, however, that forecasting the level of exports beyond about three years involves increasing uncertainty. As with the allowance in the Current Reserves Test, submitters suggested various procedures for determining an appropriate allowance the Board should make for currently authorized exports in the Deliverability Tests. An example of this was a suggestion by IPAC that 115 percent of take-or-pay be used. The majority of submitters recommended that the Board should simply make a forecast of exports for use in the Deliverability Tests. Submitters having this view included Alberta and Southern, Amoco, Canadian-Montana, Gulf, Shell, Sulpetro and Westcoast.



### 3.4 Findings of the Board on Surplus Determination Procedures

Having considered the evidence presented, the Board has decided to modify its surplus determination procedures, and in so doing, reiterates its belief that its determination of surplus must continue to take account of both the reserves and deliverability aspects of supply. The modifications are as follows:

#### The Reserves Formula

The Board will make a modification to its Current Reserves Test, which will be renamed the Reserves Formula. The Board will continue to compare the established reserves base with 25 times the current year's Canadian demand (25A1), but in making allowance for exports under existing licences, the Board will set aside the maximum quantities exportable under existing licence conditions. Previously the remaining term quantities in the licences had been used whether exportable or not. The Reserves Formula will be the means of determining the maximum amount of surplus available for export. An example of the Reserves Formula using supply and demand information from the Board's June 1981 Report is shown in Table 1.

#### Deliverability Appraisal

The Board will make one evaluation comparing its best estimates of future supply and demand rather than applying the two tests previously used. The supply and demand information to be used in this new Deliverability Appraisal will include the following:

- deliverability from established reserves,
- deliverability from established reserves plus  
future reserves additions,
- expected Canadian requirements, and
- estimated exports under existing licences.

An illustration of the resulting supply and demand comparison is shown in Figure 1.

The treatment of Canadian requirements in the new Deliverability Appraisal is unchanged from the procedure used in the previous Current and Future Deliverability Tests. With

respect to deliverability, the new Appraisal will use supply from established reserves, used previously in the Current Deliverability Test, plus supply from forecast reserves additions used previously only in the Future Deliverability Test. With respect to the allowance made for exports, the new Deliverability Appraisal will differ from the Board's previous two Deliverability Tests in that it will incorporate a forecast of exports under existing licences rather than being based on the maximum annual exports permissible under current licence provisions.

In estimating the allowance for exports under existing licences, the Board will, for the first three years of the forecast, take into account the advice of licence-holders and their customers as to the expected level of exports; and for the fourth and succeeding years of the forecast, the Board will rely to a greater degree upon the longer term trends in exports relative to the authorized levels.

The Deliverability Appraisal will not contain rigid minimum periods of protection as previously used in the Board's Deliverability Tests. Rather, the Board will use its judgement to determine the annual deliverability profile which may be deemed surplus to Canadian needs. While the Board might authorize exports which exceed the deliverability by minor amounts in any one year, the Board would not expect to exceed the sum of the annual differences between requirements and deliverability over the effective term of the Deliverability Appraisal; that is, in the period to cross-over taking place.

In coming to the above decisions, the Board agrees with submitters that suggested more flexibility is desirable in determining the amount of surplus gas. While the Board will rely on the Reserves Formula to determine the maximum exportable surplus, it will use the Deliverability Appraisal as a guideline rather than as a specific test to determine the annual quantities of gas surplus to foreseeable Canadian requirements. It is not expected that these procedures would result in the authorization for export of all the surplus calculated using the Reserves Formula.

### Related Matters

The Board also requested views on the following matters that could potentially have considerable impact on gas exports and on procedures that the Board uses to determine surplus.

### Use of Storage to Enhance Deliverability

The Board has decided that it is premature to include in revised surplus determination procedures any explicit methodology to account for deliverability from large-scale strategic storage facilities. Evidence presented on this issue was generally that studies on large-volume storage projects in Western Canada are not sufficiently advanced to determine the effect storage might have on deliverability. In addition there was not a consensus on a methodology that the Board might use.

The Board believes, however, that if major storage facilities are built, any subsequent change to deliverability should be taken into account in future decisions respecting export licences.

### Treatment of Frontier Gas

In its February 1979 Report (Page 96), the Board made the following policy statement concerning the inclusion of frontier supplies in its surplus determination procedures: "The Board considers that established frontier natural gas reserves, trend additions to these reserves and deliverability from these reserves, should be included in the Board's calculations of surplus under the Reserves and Deliverability Tests only at such time as they are believed to be within economic reach. As indicated in the Chapter dealing with supply, the Board does not believe it to be appropriate to include such reserves until the Board has granted a certificate and is satisfied that the transportation facilities will be constructed. At the present time, none of the frontier reserves meets this criterion."

Of the submitters that offered views on this topic, only three indicated a major disagreement with the Board's 1979 position. TransCanada urged the Board to adopt a procedure for judgmentally including portions of established frontier reserves in the "beyond economic reach" category for purposes of the Current



Reserves Test. Amoco proposed the use of a discounting method to reflect an expected delay in connecting frontier reserves to southern markets. Dome suggested the inclusion of deliverability from frontier reserves in its proposed 15-year deliverability test if a transportation system is expected to be established.

The majority of the other submitters, while not objecting to the views expressed by the Board in its 1979 Report, urged the Board to extend some form of recognition to the considerable established reserves in the frontier areas.

Three other major points were made in evidence on this topic. Alberta and Southern, Westcoast and several other submitters urged that the definition of the frontier be expanded to consider economic as well as geographical factors, thus including unconventional gas such as that from the deep basin in Alberta and British Columbia. Another point advanced by a number of submitters, including Consolidated, KannGaz, and Petro-Canada, was that projects designed to exploit frontier reserves may require special treatment by the Board to be economically viable. Finally, several submitters, most notably Ontario, led the argument that frontier reserves should not be given automatic access to export markets, but rather should share, with reserves in conventional areas, the obligation of supplying the domestic market. Nova Scotia led a similar argument, but stressed the need for some access of Sable Island gas reserves to the higher priced export market to promote their development.

In the Board's view, it is likely that over the next 25 years at least some frontier reserves will be serving domestic and export markets. There remains, however, considerable uncertainty, at this time, as to which, if any, frontier resources will be exploited and the markets that they will serve. In some instances development of a particular project may be contingent on the acceptability of a particular marketing plan. At this time and as a result of evidence presented at Phase I of these proceedings, the Board sees no reason to change its present treatment of frontier reserves in surplus determination procedures. The Board recognizes, however, that its policy on frontier resources may

require modification as more becomes known about their likely pattern of development.

#### Compatibility with Provincial Protection Procedures

As described earlier in this chapter, the Board has decided to change procedures it uses to determine the exportable surplus of gas. These procedures will provide more flexibility to account for changing circumstances, which may include present and future provincial policies regarding removal of gas from producing provinces.

While the Board is not obliged to design its licensing procedures to allow for either more or less stringent provincial control, nevertheless, since producing provinces have a strong influence on the amount of gas produced and used within their boundaries, their actions and consequent effects on both production and use are obviously relevant. The Board's new procedures are similar in structure to those of the Alberta Energy Resources Conservation Board.

British Columbia showed concern over whether the Board, because of timing, could take account of any decisions from the inquiry now in progress in that province. As mentioned in the hearing, the Board's intent to arrive at a decision in Phase I would not preclude the re-opening of matters arising from the British Columbia inquiry under Phase II or Phase III of this hearing should it be appropriate to do so.

#### Determination of Surplus by Region

Views of submitters on this matter were generally that there was no need to determine surplus on a regional basis. Evidence and argument were presented, however, that some special consideration might be warranted to provide access to export markets for gas from specific projects for which higher returns may be necessary. In this regard it was submitted that the Board give preference to synthetic natural gas and to frontier gas in deciding which volumes should be surplus to Canadian needs. Reference was made in the evidence to the Canada/Alberta agreement and to the need for exports to permit Sable Island reserves to be developed.

It is the Board's view that in the context of present

geographical distribution of gas supply and requirements within Canada and present gas transmission facilities, there is no need to determine surplus on a regional basis. The Board recognizes, however, that each application must be considered on its merits and that circumstances may exist where certain projects should have greater access to export markets than others.

### 3.5 Short-Term Exports

The Board agrees with the concern of TransCanada and others that additional flexibility in gas export approval procedures is desirable for short-term exports of up to two years. Such exports may be required to replace quantities foregone because of regulatory and construction delays associated with longer-term licences, or to take advantage of a new market opportunity. Although it can be expected that opportunities for short-term sales might most likely be found by existing licence holders, it is possible that new applicants might also be able to develop export proposals to market shut-in gas.

Past regulatory practice, developed during periods when a high proportion of licensed exports were actually flowing, did not adequately provide for situations, such as at present, and expeditious procedures for short-term exports are likely to be needed if exports are to approach the levels authorized in licences. Accordingly, the Board will recommend to the Minister that the NEB Part VI Regulations be amended to permit the Board to authorize, by order, the export of natural gas for terms of up to two years. It will be recommended that the total of all such authorizations for any one year be limited to three billion cubic metres.

Although public hearings will not normally be necessary for such authorizations, the Board is required, as with long-term licences, to satisfy itself that any amount of gas to be exported is surplus to Canadian requirements. The Board anticipates that this can be done by adjusting the most recent published surplus information, determined at a public hearing, for known or anticipated short-term events such as underutilization of licences, changes in domestic demand and supply, or lags in approved facility



construction. The Board would prepare these updates annually based on its knowledge of the above factors and information supplied by the industry.

Should the Governor in Council accept the recommendation to amend the Part VI Regulations, the Board will issue a memorandum of guidance outlining the information requirements for prospective applicants desiring short-term export authorizations.

Table 1

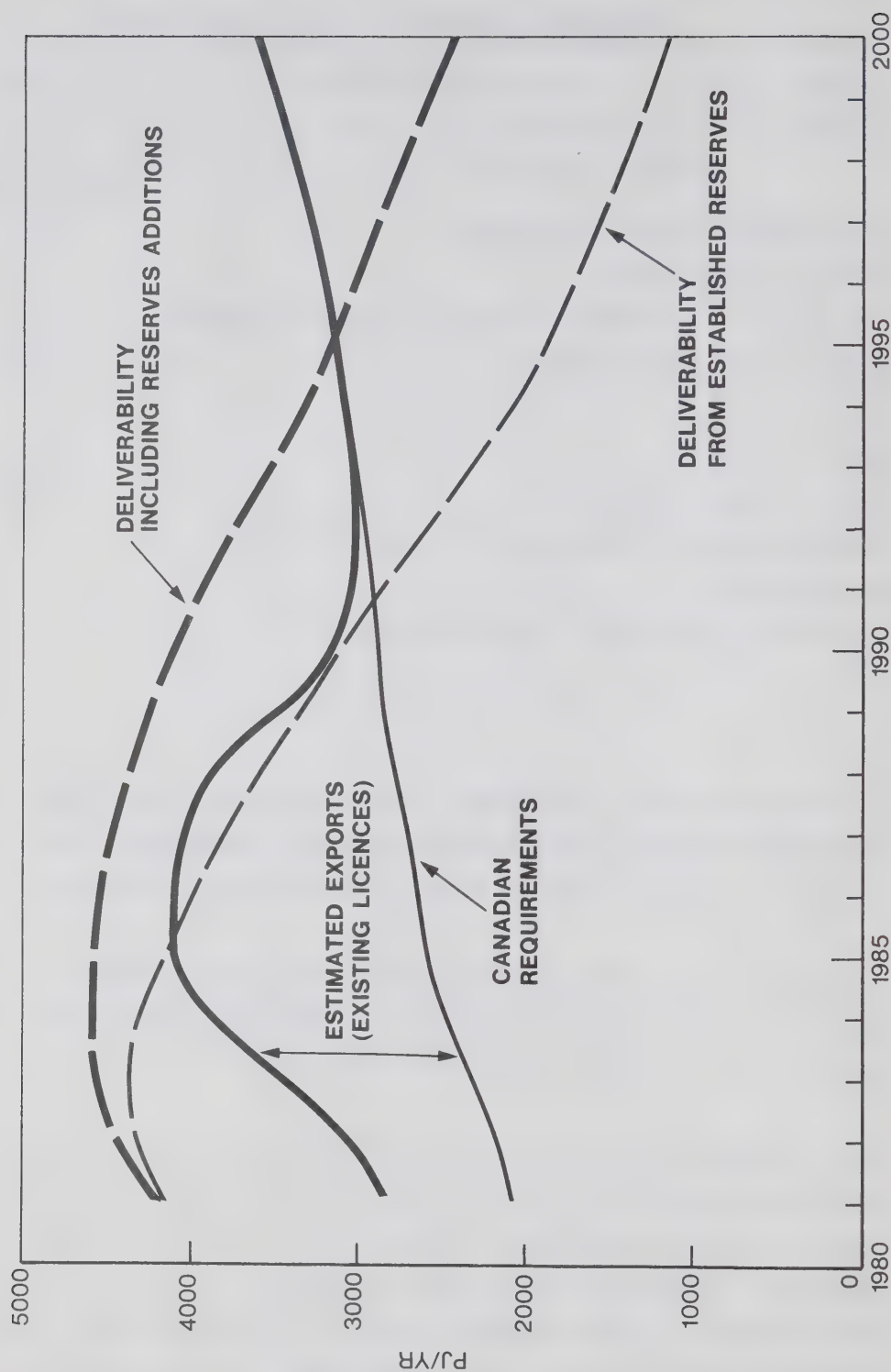
RESERVES FORMULA (illustrative)(1)  
(Exajoules)

	As of <u>31 Dec. 1980</u>
Remaining Established Reserves	76.2
Less Deferred Reserves	1.3
Less One-half of Reserves Beyond Economic Reach	0.8
Less Reprocessing Shrinkage	4.7
Total Supply	69.4
Canadian Sales(2)	45.7
Authorized Export Sales(3)	13.6
Total Requirements (including pipeline fuel)	59.3
Reserves Surplus (Total supply less total requirements)	10.1

Notes

- (1) Quantities shown are taken from the NEB June 1981 report on Canadian Energy Supply and Demand, 1980-2000, with the exception of the authorized export sales discussed in note 3.
- (2) Canadian sales include pipeline fuel and losses but do not include fuel used for exports. They are 25 times the annual demand of 1.827 EJ for 1981 (25A1).
- (3) The allowance to be made for authorized export sales has been adjusted using the altered procedures discussed in section 3.4 to reflect the maximum quantities considered exportable under existing licence conditions rather than the remaining term quantities in the licences which the Board used previously. An allowance of 0.4 EJ is included for fuel used in Canada to transport those quantities.

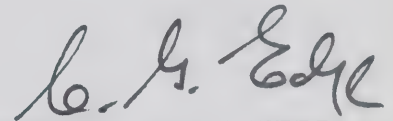
# DELIVERABILITY APPRAISAL\* (ILLUSTRATIVE)



\* BASED ON DATA IN CANADIAN ENERGY SUPPLY AND DEMAND 1980-2000  
NATIONAL ENERGY BOARD, JUNE 1981

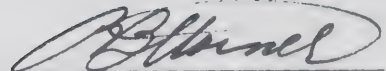
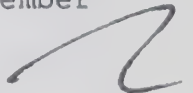


The foregoing chapters set forth our Reasons for Decision and our Decision in the matters of Phase I of the Gas Export Omnibus Hearing, 1982.



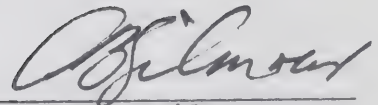
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C.G. Edge  
Presiding Member



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R.B. Horner, Q.C.  
Member



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A.B. Gilmour  
Member

Ottawa, Ontario  
May 1982



APPEARANCES

J.R. Smith, Q.C.	- Alberta and Southern Gas Co. Ltd.
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L.E. Smith K.J. MacDonald	-	National Energy Board





ABBREVIATIONS

"the Board" and "the NEB"	- National Energy Board
"the Act"	- National Energy Board Act.
"Alberta and Southern"	- Alberta and Southern Gas Co. Ltd.
"Amoco"	- Amoco Canada Petroleum Company Ltd.
"Canadian Hunter"	- Canadian Hunter Exploration Ltd.
"Canadian-Montana"	- Canadian-Montana Pipe Line Company
"CPA"	- Canadian Petroleum Association
"Consolidated"	- Consolidated Natural Gas Limited
"Consumers' Gas"	- The Consumers' Gas Company Ltd.
"Dome"	- Dome Petroleum Limited
"Gulf"	- Gulf Canada Resources Inc.
"IPAC"	- Independent Petroleum Association of Canada
"KannGaz"	- KannGaz Producers Ltd.
"Northwest"	- Northwest Pipeline Corporation
"NOVA"	- NOVA, AN ALBERTA CORPORATION
"Pan-Alberta"	- Pan-Alberta Gas Ltd.
"Shell"	- Shell Canada Resources Limited
"Sulpetro"	- Sulpetro Limited
"Texas Eastern"	- Texas Eastern Transmission Corporation
"TransCanada"	- TransCanada PipeLines Limited
"Westcoast"	- Westcoast Transmission Company Limited
"EJ"	- Exajoule ( $10^{18}\text{J}$ )
"PJ"	- Petajoule ( $10^{15}\text{J}$ )

REFERENCE REPORTS

- February 1979 Report - Canadian Natural Gas Supply and Requirements-National Energy Board February 1979
- November 1979 Report - National Energy Board - Reasons for Decision in the Matter of Applications under Part VI of the National Energy Board Act of Alberta and Southern Gas Co. Ltd., Canadian-Montana Pipe Line Company, Columbia Gas Development of Canada Ltd., Consolidated Natural Gas Ltd., Niagara Gas Transmission Limited, Pan-Alberta Gas Ltd., ProGas Limited, Sulpetro Limited, TransCanada PipeLines Limited, Westcoast Transmission Company Limited, - November 1979
- June 1981 Report - Canadian Energy Supply and Demand 1980-2000 - National Energy Board June 1981





